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Qualitative Analysis of Conduite d'approche Behavior in a Person with Wernicke's Aphasia

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Introduction

In the aphasia literature, conduite d'approche behavior or successive approximations are produced by persons with various aphasia types. However, the pattern of performance, i.e. the types of units, the structure and the content of the successive approximations varies according to the underlying deficits. In this presentation, qualitative analysis of successive approximations produced by a Wernicke's aphasic in an oral sentence production task at two test times is discussed. Based on conduite d'approche behavior, our findings have implications for the pattern of language recovery in Wernicke's aphasia, the ability monitor one's own speech output, and the interplay of phonologic, lexical and semantic processing of words.

Methods

Participant

EB, a 70-year old, male, retired engineer suffered an intra-cerebral hemorrhage left temporo-parietal. Standardized language assessment revealed Wernicke's aphasia with a moderate degree of severity for the Token Test, repetition, written language, naming and a mild oral and written language comprehension deficit.

Procedure

EB received comprehensive language testing at 8 and at 20 MPO. An oral sentence production task to picture stimuli consisting of 80 items varying in verb valency was administered before and following provision of language therapy. The audio recordings were transcribed and his productions were analyzed according to the structure and content of the sentences. His conduite d'approche behavior was analyzed according to phonemic, syllabic and whole word successive attempts.

Results

In Figure 1a the average number of approximations is given by type for nouns and verbs separately for Test 1 and Test 2. The greatest number of approximations was found for nouns in Test 1 on the syllable level. In Figure 1b the overall average number of approximations is given for nouns and verbs. A decrease in approximations is observed for the nouns and verbs across test times.

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Discussion

The predominant pattern for EB's conduite d'approche behavior consists of incorrect multiple attempts of producing syllables/morphemes which approximate the target with regard to one or more phonemes but differ in their semantic content. EB seldom arrived at the target in the first testing. Up to 53 successive attempts – phonemic, syllabic and word attempts combined – were produced for an item in the first test. For the second test administration the number of approximations for a single item was greatly reduced and whole words and phrases were produced.

With regard to the locus of the deficit, it is considered to be an impairment of lexical search strategies at the phonological output lexicon level

Comparison of the first and second test times reveals a marked decrease in the number and length of the approximations as well as a decrease in the number of utterances attempted to describe an activity depicted on a photo card. EB's ability to monitor his own speech output improved greatly. He broke off unsuccessful attempts at producing the target sentence when he realized his production was incorrect.

In summary, analysis of EB's conduite d'approche behavior provides insight into his language processing deficits and valuable information for the development of language therapy protocols addressing his specific lexical retrieval deficits.